

Reason for rejection as given in Office Action

The present invention discloses a "Liquid Crystal Display Device and driving Method therefor", in which the liquid crystal display device utilizes MOS transistor circuits comprising gate electrodes connected to scanning lines, source electrodes or drain electrodes connected to signal lines, memory capacitors formed at pixel electrodes, and a liquid crystal layer interposed between the pixel electrodes and relative electrodes. The liquid crystal display device with such a structure is already disclosed in the conventional liquid crystal display device as recited in the present specification. The technique to hold the voltage by an analog amplification circuit is also already disclosed in prior art references such as Taiwanese Patent No. 83213065 (June 1, 1995), which discloses "System of monitoring the grounding of the electrostatic discharge".

Therefore, the present application is unpatentable because of lacking of inventive step.

Title: System of monitoring the grounding of electrostatic discharge

Abstract:

A system of monitoring the grounding of electrostatic discharge. The system utilizes light-emitting diodes to reveal the contact condition of antistatic wrist straps and the human body. The antistatic wrist strap is used to discharge electrostatic charges from the human body. The monitoring system includes a plurality of fixed devices and several portable devices. These fixed devices are connected to a central control unit for integrating and storing data. Since the fixed device can cooperate with any portable device to test the contact condition of the antistatic wrist strap and the grounding line, personnel can freely operate any working machines without worrying about the grounding issue. Such a monitoring system can provide a flexible operating environment to discharge and reduce electrostatic charges and does not suffer from the drawbacks of the conventional system.

Claim (Only one independent claim)

1. A system of monitoring the grounding of electrostatic discharge, comprising a plurality of fixed devices connected to a central control unit for data integration and storage and a plurality of portable devices,
  - each fixed device, powered by an external DC source, comprising:
    - a grounding input line and a grounding comparator for comparing an input from the grounding input line with a first reference voltage;
    - a first lamp for indicating a normal state when the grounding comparator outputs a high level signal;
    - a second lamp for indicating a faulty state when the grounding comparator outputs a low level signal;
    - a grounding test port for transmitting the comparison result to the portable devices;
    - an alarm input port for receiving an alarm signal;
    - a level comparator for comparing the alarm signal with a second reference voltage and outputting a triggering signal for triggering a sound control circuit to generate pulsed currents for driving a buzzer by using a switching transistor;
    - a buffer, coupled to the portable devices, for buffering the data of the central control unit; and
    - a transistor switch for lighting a third lamp indicating whether the portable devices are coupled thereto;

each of the portable devices comprising:

a first power connector coupled to the external DC source and a second power connector coupled to a backup battery;

a socket for a plug of an antistatic wrist strap;

an impedance lower-limit comparator and an impedance upper-limit comparator, coupled to a signal port of the socket, for verifying the input impedance of the antistatic wrist strap, the impedance upper-limit comparator generating a high level signal when the impedance of the antistatic wrist strap coupled to the socket is high; the impedance lower-limit comparator generating a high level signal for lighting a fourth lamp indicating the poor contact state and switching off a fifth lamp indicating the normal state when the impedance of the antistatic wrist strap coupled to the socket is low;

a programmable logic array for controlling the fourth lamp and the fifth lamp, the fifth lamp being switched off when the signal received by the programmable logic array from the grounding test port of the fixed devices indicates the grounding is poor; and

an alarm output port for receiving the alarm signal from the alarm input port of the fixed devices and driving a buzzer when the impedance between the human body and the grounding line/the antistatic wrist strap is abnormal.